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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,794	06/14/2002	Axel Kalleder	24448-0032	9531

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1950 Roland Clarke Place  
Reston, VA 20191

EXAMINER
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ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/088,794

**Applicant(s)**

KALLEDER ET AL.

**Examiner**

Marc S. Zimmer

**Art Unit**

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-33 and 53 is/are allowed.
- 6) ☒ Claim(s) 34-38, 41, 43, 44, 46-49, 51 and 52 is/are rejected.
- 7) ☒ Claim(s) 39, 40, 42, 45 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

The rejection over Terry et al. is withdrawn because it is now appreciated that the colloidal silica disclosed in that reference would not be categorized as a rheology modifier for the simple reason that it is reacted with the silane compounds and, therefore, becomes a part of the sol in this particular instance. It is to be emphasized that Applicant's arguments were not instrumental in the withdrawal of this rejection as colloidal silica may, in fact, be employed as a rheology modifier as evidenced by the numerous references citing its utilization in this capacity.

The objections and rejections under 35 U.S.C. 112, first paragraph are hereby withdrawn in view of Applicant's remarks.

### ***Response to Arguments***

Applicant disputes the Examiner's contention that the solvent described by Ichikawa et al. will satisfy the requirement for a rheology control agent. In this connection, Applicant furnishes a definition for rheological additives taken from *Römp Lexikon, Lacke und Druckfarben* which states, in effect, that rheological additives are known as those materials that influence viscosity and flowability "secondarily". That is, according to the definition provided, binder (or host polymer), solvent and pigment/filler contribute "primarily" to the rheological character, which apparently is to be distinguished from a secondary contribution. Applicant is hereby held to this explanation of the differences between their invention and that of Ichikawa.

The problem with this definition is that what is defined as being a "primary" contributor to rheology and a "secondary" contributor is arbitrary, especially where there is more than one solvent and/or filler taught by the reference. In a formulation

Art Unit: 1712

comprised of numerous components, any materials besides a binder, a first solvent, and first pigment/filler may be fittingly characterized as either a component of the "primary" system, an additive, which has connotations of being a "secondary" component, or possibly even both depending on the circumstances. Applying this logic to the present system, it would not be inappropriate to assert that the materials in Ichikawa that primarily influence rheology are the silane and/or its partial condensate, the middle-to-high boiling solvent, fibrous potassium titanate, pigment, and ultrafine metallic oxide and that the lower alcohol exerts its influence "secondarily", especially since, in all of the specific embodiments, the middle-to-high boiling diluent is made available in comparatively larger quantities than the alcohol. Accordingly, the Examiner is not persuaded by this argument.

The Applicant also argues that the mere disclosure of like materials corresponding to the catalytically-active filler does not necessarily mean that they possess the same catalytic attributes because not all forms of the materials cited are active. Indeed, it is asserted that activity is determined, at least in part, by the method of preparation of the material.

The Examiner appreciates that there may be different forms taken by chemical compounds, particularly those that are inorganic in makeup. However, it is not the burden of the Examiner to illustrate that the colloidal alumina and titanium oxide taught by the reference exhibit catalytic activity as the Office, of course, does not retain the resources to meet such a burden. Rather, the burden is on Applicant to show that they do not. (This, in itself, would be a non-trivial matter given the broad meaning that may

Art Unit: 1712

be assigned to the term catalytically active. For instance, a demonstration that the materials disclosed by Ichikawa did not catalyze the oxidation of a certain pollutant, which is one of the non-limiting examples provided in Applicant's response, would not represent sufficient proof of catalytic inactivity as this would be the result for only a single system. Applicant would have to prove inactivity in *any and all known and unknown systems* for a true demonstration of inactivity.)

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 34-38, 41, 43-44, 46-49, and 51-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichikawa et al., JP 62-230873 A. They teach a composition comprising 15-65 wt.% of a hydrolyzate (condensate) of organotrialkoxysilane (page 3, lower right), 2-30 wt. % of a lower alcohol (page 4, upper right) which is the functional equivalent of the rheology control agent of the instant invention, 5-40 wt. % of a solvent having a boiling point of between 120° and 320° C (page 4, lower right), 0.5-8 wt.% of fibrous potassium titanate (page 5, upper left), 20-40 wt.% of a metal oxide pigment (page 5, upper right), and 0.5-8 wt.% of an ultrafine metallic oxide particulate. Exemplary of the metal oxide particulate are titanium oxide and colloidal alumina (page 671, lower left quadrant) which Applicant has admitted are representative of the catalytically active fillers.

As for claims 35-37, methyltrimethoxysilane is the only silane compound in use in the embodiments outlined in the table on page 9.

As for claim 38, potassium titanate is a known conductor of electricity and alumina is a known conductor of heat.

As for claim 46, there is no indication that glass particles are an essential or non-essential element of Ichikawa's invention.

As for claims 51 and 52, the lower alcohol is added in quantities as low as 2 wt. %.

***Allowable Subject Matter***

Claims 39-40, 42, 45, and 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 53 is allowed as it recites more specific examples of the rheology control agent that are not disclosed by the reference. Claim 21 is the same as original claim 11 and remains allowable (as are claims 29-33 insofar as an additional survey of the art did not yield a reference having content especially germane to the claimed process).

This office action will not be made final because some of the claims presently rejected are identical in scope to those previously presented that had been indicated as containing allowable subject matter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 8, 2004

  
MARGARET G. MOORE  
PRIMARY EXAMINER